

Mid-Year Evaluation Report  
of  
The UIC Program  
as Administered by the  
California Division of Oil and Gas  
Under Section 1425 of the  
Safe Drinking Water Act

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## I. SUMMARY AND RECOMMENDATIONS

In the State of California, the California Division of Oil and Gas (CDOG) has primacy for the Class II Underground Injection Control (UIC) program under Section 1425 of the Safe Drinking Water Act. The purpose of this report is to document CDOG's implementation of the program during the first half of FY 85 and to make recommendations for improvements that should be made in the remainder of FY 85. This report summarizes the results of the FY 85 Mid-Year Evaluation that was conducted in April, 1985. The evaluation, which included a file review and an evaluation conference, showed that CDOG is implementing the UIC program effectively and is complying with its program as delegated.

To summarize the outcome of the evaluation, there are some activities for which CDOG is commended, some issues which CDOG should address to improve the program and some issues which EPA should assist CDOG in addressing. They are as follows. Specifically, CDOG is commended for conducting mechanical integrity tests and inspections at a rate that exceeds EPA's requirements, for its cooperation with EPA on the resolution of issues related to water softener brine and air scrubber wastes and for its willingness to coordinate on implementing the resolution of these issues. To maintain compliance with UIC program requirements, CDOG should consider augmenting its Quality Assurance procedures (as described in Section III A 3 of this report). CDOG should also clarify with the District Offices what constitutes an annular pressure test for the purpose of demonstrating mechanical integrity. Issues that EPA and CDOG need to address jointly are; coordinating the inventory update mechanism, determining if wells that are intermittently stimulated with steam should be included in the inventory, and coordinating on non-Class II wells within field boundaries.

## II. BACKGROUND

EPA granted primacy to CDOG for the Class II UIC program under Section 1425 of the Safe Drinking Water Act. The effective date of the delegated program was March 14, 1983.

At that time, the California State Water Resource Control Board (SWRCB) had been designated by the Governor as the lead UIC agency. Therefore, the SWRCB was the grant recipient with CDOG receiving UIC funds through the SWRCB. In December, 1983, the SWRCB notified EPA that it was no longer seeking primacy for the non-Class II UIC program. In May 1984, the Governor designated CDOG as the lead UIC agency. After meetings with EPA, SWRCB, and CDOG, a Successor in Interest Agreement was signed in July, 1984 to transfer UIC funds and responsibilities to CDOG from the SWRCB.

The criteria used for this evaluation was based on the following documents: Memorandum of Agreement; Program Description, State Regulations, Grant Work Plan and Award Document, and EPA's Operating Guidance. The Mid-year evaluation was conducted in accordance with EPA Region 9's UIC Oversight Strategy and was conducted in two parts: a file review and a subsequent Mid-year evaluation conference. The file review was conducted by the EPA program manager at the District 4 Office in Bakersfield. The files were reviewed for administrative and technical compliance with the program as approved by EPA. The evaluation conference was held in Sacramento at CDOG's Headquarters office with the following people in attendance: Marty Mefferd, Si Cordova, Bob Reid and Marilu Habel, all from CDOG and Kati Neidig from EPA. The grant work plan was used as an agenda for the evaluation conference.

### III. DISCUSSION BY PROGRAM ELEMENT

A. ADMINISTRATION AND PROGRAM DEVELOPMENT. CDOG is implementing and managing the program in compliance with its the primacy application and is responsive to EPA's requirements and requests. As with any relatively newly delegated program, issues arise that need to be resolved. CDOG is cooperative in working with EPA to resolve issues as effectively as possible. CDOG is on target for the tasks listed in this program element. The specific work plan activities are discussed below.

1. Quarterly Estimated Expenditures. CDOG did not expend UIC funds in the first quarter of FY 85 as the Budget Change Proposal (which must be approved by the State prior to expenditure of funds) had not been approved by the end of the first quarter. CDOG continued to implement the program during that time using State funds. In the second quarter of FY 85, CDOG expended approximately \$101,000 of the \$403,492 which was awarded in July, 1984.

2. Grant Application. The grant application for FY 85 was submitted slightly after the target date but in a timely manner.

3. Quality Assurance. A QA Policy Statement was submitted on September 26, 1984 in compliance with a special condition of the grant awarded in July, 1984. The statement appointed Bob Reid as the QA officer for CDOG. The EPA guidance for the Phase I QA plan is not yet final; but in the Policy Statement, CDOG has agreed to comply with EPA's schedule for developing and implementing the QA program. CDOG submitted a preliminary draft of the Phase I project plan in January 1985. It was basically a summary of the procedures that CDOG has in place for chemical analysis of fluids. CDOG is currently working toward a draft Phase I plan. CDOG should consider augmenting its quality assurance procedures for fluid analysis by issuing guidelines to operators on sample collection and handling and by describing, in the Manual of Instruction, quality assurance procedures to be followed by CDOG for sample handling and fluid analysis.

4. Annual Report. The annual report reflects UIC activity during calendar year 1984 and is to be submitted to EPA by February 28, 1985. The annual report was submitted by CDOG on time. It represents a compilation of reports submitted to CDOG's HQ office by the District Offices. The level of activity shown in the report is appropriate. However, one issue was identified in discussing the annual report with CDOG. CDOG needs to correct the District Offices' understanding of pressure testing as an acceptable demonstration of mechanical integrity. In the report from one of the District offices, a footnote indicated that annular pressure inspections may have been counted as mechanical integrity tests (MIT). This is not an approved type of MIT for the UIC program if "annular pressure inspections" means that the annular pressure gauge was viewed and the pressure noted. It should be clarified that an annular pressure test done to demonstrate mechanical integrity involves pressuring the annulus and recording the pressure drop-off over time. The District whose report was so footnoted is not a major UIC District, so this would not appear to be a major problem for the State UIC program. However, CDOG should assure that the District Offices have a clear understanding of the tests that are acceptable for demonstrating mechanical integrity.

5. Inventory Update. CDOG submitted the inventory update to EPA on January 31, 1985. The inventory was submitted on a tape that Region 9 then converted into a format that is compatible with the Federal UIC Reporting System (FURS). The inventory update was not complete by February 28, 1985 due to several factors within EPA. Most of the update problems have been worked out, however EPA and CDOG need to work together to resolve any misunderstandings that may complicate the update for next year. Two other issues related to the inventory need to be resolved by EPA and CDOG.

- a. Should or how should production wells that are intermittently stimulated with steam be included in the inventory?
- b. Multiple completion wells may show on EPA's inventory as multiple wells. This would not amount to a large error but may need to be corrected.

The resolution of inventory issues is ongoing for this State as it is with most other States and Regions.

6. Participation in Mid-Year File Review. The file review was conducted in Bakersfield (District 4) on April 3 and 4. The files reviewed included three waterflood projects, three steam flood projects and six water disposal wells. The folks in the Bakersfield office were very helpful and their time was appreciated. It was agreed in the evaluation conference that EPA may conduct two more file reviews in FY 85. If conducted, one of the reviews will be done in Long Beach (District 1).

The remaining activities listed in the grant work plan for this program element are to be completed in the second half of FY 85 and will be discussed in the End-of-Year evaluation.

B. PERMITTING. After reviewing the sample of project and well files described in the previous section, it appears that the permits are issued according to the procedures described in the State's primacy application. The files that were reviewed showed good technical judgement. CDOG does not have a problem with backlog, the turnaround on permits is timely and the process seems to be efficient.

C. INSPECTION AND SURVEILLANCE. CDOG's inspection policy is to inspect the surface facilities and wellhead annually. In practice, many water disposal and water flood wells are inspected two or three times per year and most steamflood wells are inspected at least every two to three years. Inspections are also done in response to complaints and for cause (non-reporting operators, etc.). Monthly reports submitted by the operators are computerized and reviewed by the computer for non-reporting, incomplete reports and for anomalous values. CDOG requires mechanical integrity tests (or fluid injection surveys) to be performed on injection wells within three months of the beginning of operation and annually thereafter. That schedule may be modified if evidence shows that fresh water will not be degraded as a result of that modification. Most water disposal and waterflood wells are tested annually, though steamfloods are on a schedule that may average closer to every two to three years. CDOG witnesses the initial test and may witness subsequent tests. According to the annual report, more than 25% of the surveys on the existing wells are witnessed. Since the initial surveys are also witnessed, CDOG has a greater than 25% witness rate. CDOG is generally exceeding EPA's requirements for inspections, mechanical integrity testing and witnessing; however, the following suggestion is offered. EPA fully agrees with CDOG in prioritizing the surveillance of wells as follows: water disposal wells, waterflood projects and steamflood projects (in that order). However, CDOG may consider increasing its surveillance of steamfloods if it would not be to the detriment of the other types of wells.

D. ENFORCEMENT. CDOG's sequence of enforcement actions is very similar to those listed in EPA's compliance strategy. CDOG usually makes initial contact (verbal notification in the field or by phone) to inform the owner or operator of the problem. CDOG appears to get good compliance from these notifications. However, if the operators do not respond, CDOG moves on to issue formal orders, cause the work to be done by agents of the State, or order the operation to be shut in. CDOG's field presence, good working relationship with the regulated community and the real possibility that an operation can be shut in for non-compliance are factors that lead to a high rate of compliance. The annual report indicates that about 94% of the wells were in compliance in 1984. (Non-compliance was reported for all levels of violations, not just major violations.)

E. PUBLIC PARTICIPATION. CDOG issues public notice for project proposals and for modification or expansion of projects in compliance with the 1425 guidance. However, since CDOG had not issued such notice prior to delegation, EPA requested that CDOG submit proof of publication to EPA for review. Since CDOG has been issuing these notices for over a year, it is no longer necessary for the proofs to be sent to EPA. In the future, EPA will review CDOG's issuance of public notice as part of the file review. CDOG produced a video on the role of CDOG and published an Oil and Gas Primer. While these were not UIC grant products, there should be indirect benefits to the UIC program.

F. TRAINING AND TECHNICAL ASSISTANCE PROJECT. CDOG is conducting a training needs survey for its staff. The results of that survey may be used to establish a more formal training program. The training referenced here is to augment the staff's understanding of UIC issues and does not imply a lack of technical expertise.

G. DATA MANAGEMENT DEVELOPMENT PROJECT. The programs that will be developed in this project have not been started. Development of these programs is partially dependent on the results of the needs assessment and study which is discussed below in Section III, I, 3.

H. EQUIPMENT PROCUREMENT PROJECT. CDOG prepared and submitted to EPA the equipment list and has obtained price quotes or estimates. CDOG will start procuring equipment in the second half of FY 85.

I. SPECIAL STUDY PROJECTS. Several special studies were undertaken this grant year. They are as follows.

1. Groundwater Protection Report. This study evaluates the effect of the oil and gas operations on underground sources of drinking water in the San Joaquin Valley. The study has been started and should be complete in FY 86.

2. Lab Certification Report. The report will be used in conjunction with CDOG's QA Project Plan. The research is almost complete and the report should be complete by the due date of September, 1985.

3. Automation of the CDOG Offices. The needs analysis and feasibility study for this project have not been started. They will be done in the second half of FY 85 and will be used to support the purchase of hardware and software that will be used to track and implement the UIC program.

#### IV. GENERAL ISSUES RELATED TO PROGRAM ADMINISTRATION AND MANAGEMENT

A. GRANT ADMINISTRATION. When CDOG submitted its request for FY 85 funds, EPA recognized that CDOG needed to negotiate an indirect cost rate for federal funds. CDOG has already begun work to correct the situation, however the grant award (to be made in May) will include a special condition requiring CDOG to negotiate a correct indirect cost rate. As FY 85 was the first year in which CDOG received federal grant funds directly, EPA will be working with CDOG to assure that the Attachment P audit requirements are met and to assure that CDOG implements procedures for inventory and management of Federal property. No property had been bought with Federal dollars in the first half of FY 85.

B. STAFFING. The staffing levels seemed acceptable for CDOG's needs. The UIC staff of CDOG is currently at 26.0 workyears.

C. COORDINATION. CDOG maintains six District Offices and a Headquarters. Coordination is effected by the issuance of a Manual of Instruction (by which HQ prescribes standard operating procedures to the Districts), informal and frequent phone contact and regularly scheduled meetings. The system seems to work well. CDOG also coordinates with the SWRCB on UIC project approvals in accordance with the MOA submitted as part of CDOG's primacy application.

D. OVERSIGHT. The EPA UIC Oversight Strategy was presented at the mid-year evaluation conference. CDOG and EPA had discussed most of the aspects of the Strategy in previous meetings. CDOG reviewed the strategy, suggested some rewording, and accepted the Oversight Workplan. The suggestions were incorporated into the Strategy and a letter documenting the above will be sent to CDOG to serve as the oversight agreement for FY 85. However, beginning in FY 86, the Oversight Agreement will be negotiated and implemented at the beginning of the fiscal year.

E. AUTHORITY FOR GEOTHERMAL WELLS. CDOG expressed an interest in having authority for geothermal wells (a type of Class V well) under the Safe Drinking Water Act. After the mid-year evaluation, CDOG submitted a document to EPA that explains CDOG's authority for geothermals and its current procedures for permitting and enforcement for those wells. EPA is reviewing that document and investigating options by which authority may be granted.

F. AUTHORITY OVER NON-CLASS II WELLS WITHIN FIELD BOUNDARIES. Under State statute, CDOG has authority over wells within the administrative boundary of an oil or gas field to assure that oil, gas, and freshwater resources are not endangered. EPA and CDOG should develop a system for exchange of information so that both parties can effectively carry out their mandates on non-Class II wells within those boundaries. That system should be developed in the second half of FY 85.